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Grafting and Regeneration in Hydromedusæ. — An interesting series of experiments on grafting and regeneration of Hydromedusæ has been carried out by C. W. Hargitt.¹ Small pieces of vigorous hydroid stems were held together in different positions by slivers of lead and were thus readily grafted. The bells of *Gonionemus* were emarginated so as to check their spontaneous movements and were then held together in pairs in various positions by being strung on bristles. As a result of these experiments, it was found that pieces of hydroid stems united with one another with great freedom either orally or aborally, and thus gave evidence of no polarity. The success of the experiments was quite independent of the sexes of the individuals from which the parts came. While pieces from closely allied species could be intergrafted, material representing different genera did not respond successfully. The experiments on the medusæ showed that though these animals regenerated and grafted freely, aboral grafts were never successful, the animal thereby showing a marked polarity.

G. H. P.

Regeneration in Grafted Tissue. — As is well known, the tail of one species of tadpole may be grafted on the body of another, and the two parts in time form an effective union. If the two species used have characteristically different kinds of pigment, the fate of the tissues thus brought together can be easily followed. The grafted ectoderm eventually covers only the tip of the developing tail, whereas the grafted mesoderm forms a considerable part of that organ, *i.e.*, at the beginning of grafting, the grafted tissues are separated from the stock tissues by a single transverse plane; later the plane of separation between grafted ectoderm and stock ectoderm is much posterior to that between the two kinds of mesoderm. Grafted tails when cut off regenerate, and the results of this process have been studied by T. H. Morgan.² If cut transversely, the cut surface from which regeneration will take place may exhibit a face of ectoderm from the stock and of mesoderm from the graft. The grafted tail may be cut obliquely, so that the cut surface will exhibit stock and graft ectoderm and graft mesoderm. In all these cases the regenerated tails are composed of cells easily referable to their sources, and it may be concluded that in regeneration from a region

¹ Hargitt, C. W. Experimental Studies upon Hydromedusæ, *Biological Bulletin*, vol. i, No. 1, pp. 37-51. October, 1899.

² Morgan, T. H. Regeneration of Tissue Composed of Parts of Two Species, *Biological Bulletin*, vol. i, No. 1, pp. 7-14. October, 1899.